

### REMARKS

Claims 42 to 78 are pending in this application of which claims 42, 52, 58, 63, 68 and 74 are the independent claims. Claims 1 to 41 are cancelled without prejudice. Favorable consideration and further examination are respectfully requested.

Applicants thank the Examiner for taking the time to respond to arguments presented by Applicants.

Claims 1, 4 to 6, 8 to 20, 23 to 25 and 28 to 32 and 36 to 41 were rejected under 35 U.S.C. § 103(a) as being obvious over Ohta et al. (U.S. Patent Application Publication Number 2002/0083317 hereinafter "Ohta") in view of Tardo et al. (U.S. Patent Number 7,082,534).

The applied art is not understood to disclose or to suggest the foregoing features of claim 1. In particular, the cited references do not disclose or suggest that each buffer element has a size that is at least as large as a largest authentication algorithm block size implemented by the authentication cores (emphasis added).

The Examiner has indicated that Ohta teaches the limitation at paragraph [0011] citing "a data block accumulation unit that outputs the accumulated amount to the authentication processing unit when it reaches the smallest data block size for the authenticating processing" (emphasis added, see page 12 of the Office Action). However, Ohta only includes a single authentication core and therefore does not teach more than one authentication core much less authentication cores requiring a different authentication algorithm block size. Therefore, Ohta does not teach that each buffer element has a size that is at least as large as a largest authentication algorithm block size implemented by the authentication cores.

Tardo merely mentions different authentication algorithms. Tardo does not teach buffer elements much less a buffer element having a size that is at least as large as a largest authentication algorithm block size implemented by the authentication cores.

Accordingly, for at least the reasons indicated above, even if Tardo were combined with Ohta, the resulting hypothetical combination would not disclose or suggest that each buffer element has a size that is at least as large as a largest authentication algorithm block size implemented by the authentication cores. For example, even using Tardo's authentication cores and assume more than one authentication core have different block sizes, Ohta clearly says that when the smallest data block size is achieved the data block it is outputted and not the largest authentication algorithm block size implemented by the authentication cores.

Claims 52, 58, 63, 68 and 74 include the feature that each buffer element has a size that is at least as large as a largest authentication algorithm block size implemented by the authentication cores as in claim 42. Applicants submit that the Tardo and the Ohta references should also be withdrawn with respect to claims 52, 58, 63, 68 and 74 for at least the same reasons as claim 42.

Furthermore, independent claims 58 and 68 along with dependent claims 44, 53, 65 and 77 include the limitation that one of the authentication cores processes data in 16-byte blocks and another one of the authentication cores processes data in 64-byte blocks. The Examiner has indicated that Ohta teaches this limitation at paragraph [0016], which states

Here, in the above-mentioned security communication packet processing apparatus, the data block for the encryption processing can be 64 bits, and the data block for the authentication processing can be 512 bits. In this case, the data block accumulation unit may output the data blocks when it accumulates eight encrypted data blocks.

However, Ohta mentions nothing about two authentication cores because Ohta only teaches a single authentication core. Furthermore, the Examiner's statement that "outputting blocks of data to the encryption and authentication processors in multiples of 8 bits, which include all processing block in claims 8 and 9" (see page 12 of the Office Action) is confusing and should be explained further for the record. Applicants respectfully submit that the cited passage clearly only states 512 bits for authentication processing which, assuming 8 bits per byte, is 64-bytes. Thus, there is not a teaching that suggests encryption of 16-bytes in the cited passage. Thus, Applicants respectfully submit that claims 44, 53, 58, 65, 68 and 77 should be allowed.

Moreover, independent claims 52 and 68 along with dependent claims 48, 60, 66 and 78 include the limitation that one of the cipher cores processes data in 8-byte blocks and another one of the cipher cores processes data in 16-byte blocks. The Examiner has indicated that Ohta teaches this limitation at paragraph [0016] (see page 12 of the Office Action). However, Ohta mentions nothing about two cipher cores because Ohta only teaches a single cipher core. Furthermore, the Examiner's statement that "outputting blocks of data to the encryption and authentication processors in multiples of 8 bits, which include all processing block in claims 8 and 9 (see page 13 of the Office Action) is, as mentioned previously confusing, and should be explained further for the record. Applicants respectfully submit that the cited passage clearly only states 64 bits for encryption processing which, assuming 8 bits per byte, is 8-bytes. Thus, there is not a teaching that suggests encryption of 16-bytes in the cited passage. Thus, Applicants respectfully submit that claims 48, 52, 60, 66, 68 and 78 should be allowed.

For at least the foregoing reasons, Applicants request withdrawal of the art rejections.

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Applicants submit that all dependent claims now depend on allowable independent claims.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for withdrawing the prior art cited with regards to any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Applicants submit that the entire application is now in condition for allowance. Such action is respectfully requested at the Examiner's earliest convenience.

Applicants' attorney can be reached by telephone at (781) 401-9988 ext. 123.

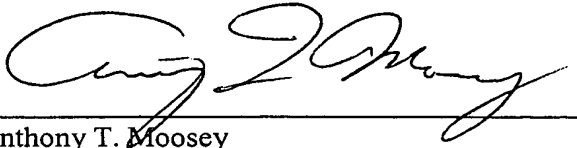
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No fee is believed to be due for this Response; however, if any fees are due, please apply such fees to Deposit Account No. 50-0845 referencing Attorney Docket: INTEL-013PUS.

Respectfully submitted,

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